**Dichotomous Key to the Universe**

* 1. Is a single object……………………………………………………………………………….2.
  2. Is a system of objects……………………………………………………………………….4.
  3. Produces its own light and heat……………………………………………………….3.
  4. Reflects light from another source…………………………………………………..8.
  5. Massive, condensed gases ………………………………………………………………**Star**
  6. Extended, spread out cloud of gases and dust.…………………………….....**Nebula**

1. 1. Contains only one star and associated planets………………………………….**Solar System**
   2. Contains multiple stars and associated planets…………………………………5.
2. 1. Stars have a gravitational relationship …………………………………………….6.
   2. Stars form an apparent pattern in the sky………………………………………..**Constellation**
3. 1. Does not form a definite shape………………………………………………………..**Irregular Galaxy**
   2. Has a definite shape…………………………………………………………………………7.
4. 1. Has long, rotating spiral arms where stars are forming…………………….**Spiral Galaxy**
   2. Closely spaced stars with no active star formation……………………………**Elliptical Galaxy**
5. 1. Orbits around a star…………………………………………………………………………9.
   2. Does not orbit around a star……………………………………………………………11.
6. 1. Has sufficient mass to assume a round shape…………….……………………10.
   2. Does not have sufficient mass to assume a round shape……………...…12.
7. 1. Is composed primarily of gas……………………………………………………………**Gas Giant Planet**
   2. Is composed primarily of rock, metal, and/or ice ……………………………13.
8. 1. Crashes into a planet’s atmosphere…………………………………………………**Meteor**
   2. Revolves around a planet………………………………………………………………..**Moon**
9. 1. Has a long tail of gases and dust………………………………………………………**Comet**
   2. Has an irregular shape, but no tail……………………………………………………**Asteroid**
10. 1. Has “cleared the neighborhood” around its orbit……………………………**Terrestrial Planet**
    2. Has not “cleared the neighborhood” around its orbit………………………**Dwarf Planet**